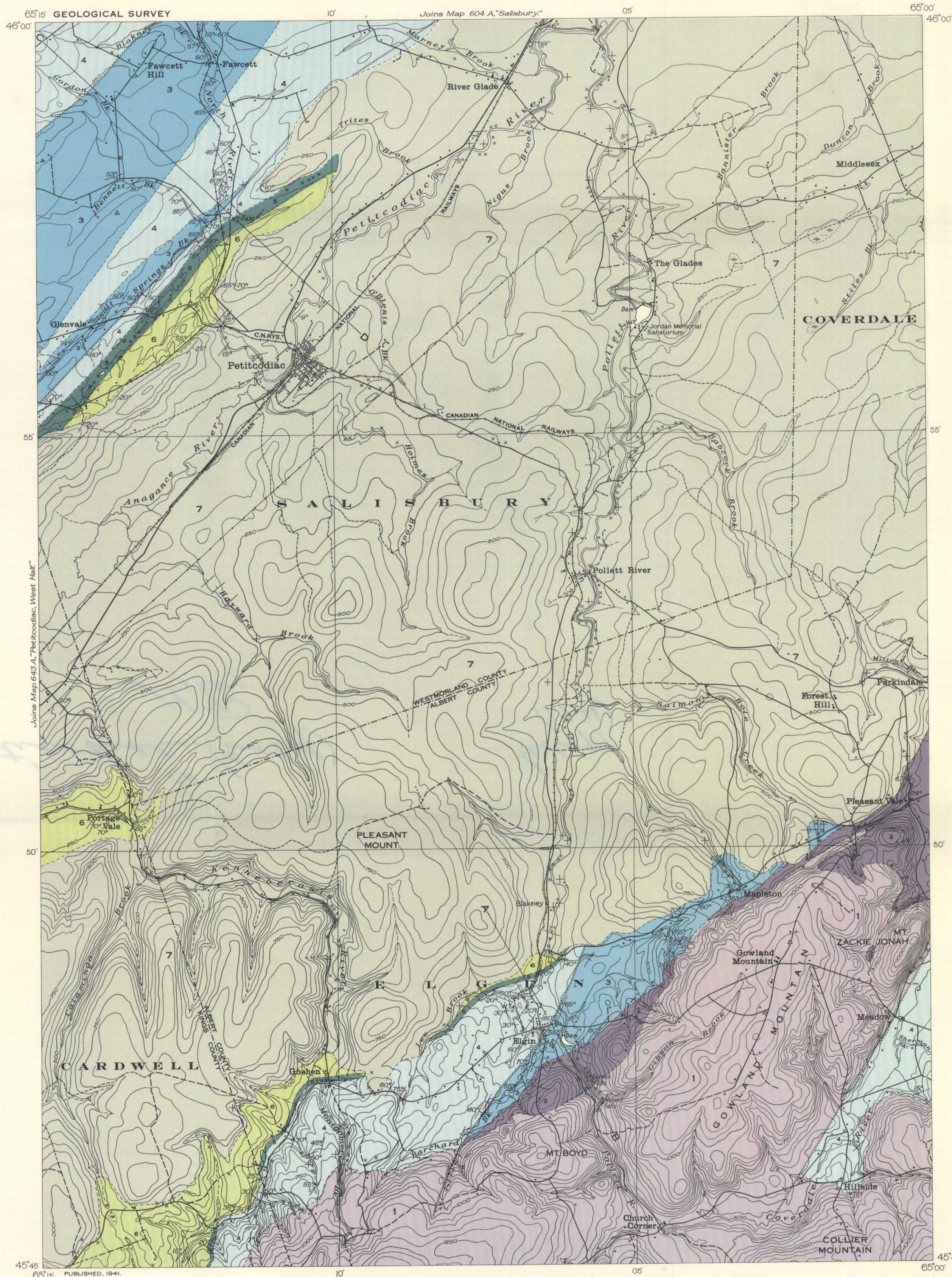


Diagrammatic structure sections along lines A-B and C-D



LEGEND

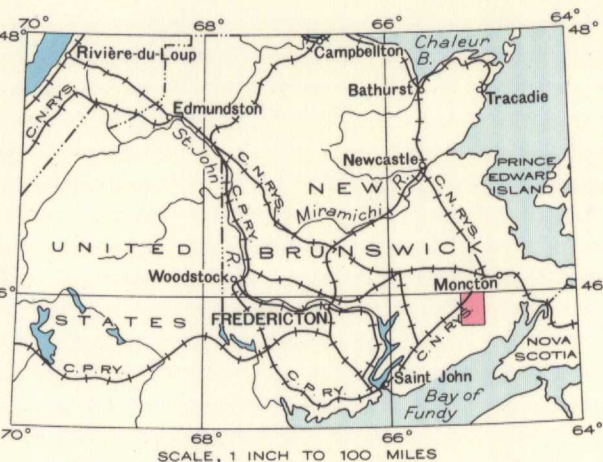
- CARBONIFEROUS PENNSYLVANIAN**
- 7 Grey sandstone, shale and conglomerate
- MISSISSIPPIAN AND (?) PENNSYLVANIAN**
- 6 Red conglomerate, sandstone and shale
- MISSISSIPPIAN WINDSOR SERIES**
- 5 Mainly limestone and gypsum
- ALBERT FORMATION: grey shale, sandstone, limestone and conglomerate**
- 4 Red feldspathic grit, coarse conglomerate, sandstone and shale
- MEMRAMCOOK FORMATION: red to grey conglomerate and sandstone**
- 3
 - 2

- PRE-CARBONIFEROUS**
- 1 Highly altered sedimentary and volcanic rocks; granitic intrusives

- Fault:
- Bedding (inclined, vertical, horizontal):
- Observed rock outcrop:
- Note. Observed rock outcrops may be indicated either by a cross, x, or by a bedding symbol.
- Provincial highway:
- Road and buildings:
- Road not well travelled:
- Bush road or trail:
- Power line:
- Church:
- School:
- Post Office:
- Cemetery:
- Prospect:
- Water-tank:
- Triangulation station:
- County boundary (position approximate):
- Parish boundary (position approximate):
- Intermittent stream:
- Dam:
- Marsh:
- Contours (interval 50 feet):
- Depression contour:

Geology by J. S. Stewart, 1939.

Base-map from surveys and topography by the Topographical Survey, 1933 and 1935. Cartography by the Drafting and Reproducing Division, 1941.



DESCRIPTIVE NOTES

The Memramcook formation (2) rests unconformably on pre-Carboniferous rocks. It consists mainly of massive conglomerates and ranges from a few feet to several hundred feet thick. The Albert formation (3) overlies the Memramcook conformably. It is composed chiefly of dark grey shales some of which are paper thin. These shales weather readily and are easily eroded so that only small sections of them are exposed. No horizon guides have been recognized and the total thickness of the formation is not known. Where it outcrops along the north flank of Caledonia Mountains, near Elgin, the lower part of the Albert formation consists of dark grey shales with lesser amounts of limestone. The upper part of the formation outcrops on North River near Fawcett where it consists of dark grey shales with occasional thin interbeds of pale yellow weathering calcareous shale. These shales grade upward within a thickness of 20 or 30 feet into reddish, thick bedded, sandy strata of the overlying Moncton group.

The Moncton group (4) rests conformably on the Albert formation and near Goshen overlaps onto the pre-Carboniferous rocks of Caledonia Mountains.

Along the north flank of Caledonia Mountains, between Elgin and Goshen, the Windsor Series (5) lies unconformably on the Moncton. There the Windsor strata dip at angles of 20 degrees or less whereas the underlying Moncton beds have dips ranging from 35 to 50 degrees. In the northwest part of the area there is no apparent evidence of structural discordance at the base of the Windsor for, although the actual contact is not exposed, the attitudes of nearby outcrops of Moncton and Windsor strata are practically the same. Near Glenvale a section of Windsor strata 700 feet thick consists of 50 feet of limestone overlain by 650 feet of gypsum. The upper and lower contacts of the series are not exposed. Along the north flank of Caledonia Mountains the Windsor Series is much thinner. At one place southwest of Goshen it is only represented by 25 feet of limestone and this lies between strata of coarse conglomerates.

The Hopewell group (6) rests unconformably on the Windsor series but with no appreciable structural discordance. In most places the lower Hopewell beds consists of coarse red conglomerate. From place to place this conglomerate rests on different members of the Windsor series. In the type locality near Hillsborough, the Hopewell group includes formations of both Mississippian and Pennsylvanian age that follow one another with apparent conformity. In the Petitcodiac map-area the Hopewell beds are equally as deformed as the underlying Windsor strata, and it is probable that they here include only the lower formations of the group and may not be represented near Hillsborough.

The Petitcodiac group (7) of this map-area overlies the Hopewell unconformably. In general the strata are nearly flat lying but near Glenvale grey pebbly sandstone and conglomerate beds have a dip as high as 25 degrees. These strata rest on Hopewell red shale which has a dip of 55 degrees. Plant remains are common in Petitcodiac strata but are rare in Hopewell and Moncton beds. Although the prevailing colour of the Petitcodiac strata is grey, some red weathering sandstones occur in the northeastern part of the area and are well exposed along Pollett River.

With the exception of the granitic intrusive bodies, which are comparatively fresh and undeformed, the pre-Carboniferous rocks are closely folded, much broken by faults and greatly metamorphosed. In contrast with them the Mississippian formations, though folded and faulted to a moderate degree, are quite unaltered. The general structural trend of both pre-Carboniferous and Mississippian strata is northeasterly. Pennsylvanian, Petitcodiac strata are only gently warped and in most places are nearly flat lying.

MAP 642A
PETITCODIAC
(EAST HALF)
KINGS, WESTMORLAND, AND ALBERT COUNTIES
NEW BRUNSWICK

Scale, 63,300 or 1 Inch to 1 Mile
Miles

Approximate magnetic declination, 23°30' West.

**NOT TO BE TAKEN FROM LIBRARY
NE PAS SORTIR DE LA BIBLIOTHÈQUE**



642A